Claims

1. A participant (1) of a communication system,

having a first communication path (10) and a second communication path (20), the communication paths in the communication system preferably with a double-ring topology that operates in contrary directions,

and the participant (1) furthermore includes a first processing unit (11) for processing information signals, obtained via the first communication path (10), and/or for generating and sending information signals via the first communication path, and a second processing unit (21), for processing information signals received via the second communication path (20) and/or for generating and sending information signals via the second communication path,

and furthermore, a first activatable coupling (13, 22) is located in the participant between the first communication path (10) and the second communication path (20), such that upon activation of the first activatable coupling, information signals are picked up from the first communication path (10) and delivered to the second communication path (20), the delivery to the first activatable coupling in the participant (1) being located downstream in the signal travel direction of the processing unit (21) of the second communication path (20),

wherein

the processing unit (11, 21) checks the input signal for its presence, and one phase locked loop per communication path is provided in the participant (1) for phase preparation of the received information signal.

2. The participant in accordance with claim 1,

wherein the pickup of the first activatable coupling is located in the participant downstream in the signal travel direction of the processing unit (11) of the first communication path (10).

3. The participant in accordance with one of claims 1 or 2,

wherein the first activatable coupling includes a first intermediate connecting line (13), for connecting the first communication path (10) to the second communication path (20), and a first switchover element (22), inserted into both the first intermediate connecting line

(13) and the second communication path (20).

4. The participant in accordance with claim 3,

wherein the first switchover element (22) is a multiplexer with two inputs and one output, and the inputs are switchable selectively to the output.

5. The participant in accordance with one of the foregoing claims,

wherein the processing units (11, 21) are microprocessor systems for protocol processing, preferably for HDLC processing.

6. The participant in accordance with one of the foregoing claims,

wherein a second activatable coupling (23, 12) is also located in the participant (1), between the first communication path (10) and the second communication path (20), such that upon activation of the second activatable coupling, information signals are picked up from the second communication path (20) and delivered to the first communication path (10), and

wherein the delivery to the second activatable coupling is located downstream in the signal travel direction of the processing unit (11) of the first communication path (10),

and furthermore, the pickup of the second activatable coupling is expediently located downstream in the participant in the signal travel direction of the processing unit (21) of the second communication path (20).

7. The participant in accordance with claim 6,

wherein the second activatable coupling includes an intermediate connecting line (23) for connecting the second communication path (20) to the first communication path (10) and a second switchover element (22), inserted into both the intermediate connecting line (23) and the first communication path (10), and the second switchover element (12) is expediently a multiplexer with two inputs and one output, and the inputs are selectively switchable to the output.

8. The participant in accordance with one of the foregoing claims,

wherein one receiver per communication path, preferably an optical receiver, is provided in the participant for receiving and coupling in the information signals from the communication path into the participant.

9. The participant in accordance with one of the foregoing claims,

wherein one decoupling unit per communication path, preferably a light-emitting diode with a trigger circuit, is provided in the participant for decoupling the information signals from the participant into the communication path.

10. The participant in accordance with one of the foregoing claims,

wherein the participant is a secondary participant (1', 1") of the communication system.

11. The participant in accordance with one of the foregoing claims,

wherein the participant is a central participant (1z) of the communication system.

12. The participant in accordance with one of the foregoing claims,

wherein the participant is integrated into an actuator and/or a sensor, preferably into a drive control unit, and especially preferably into a drive control unit of a control motor.

13. The participant in accordance with one of the foregoing claims,

wherein the input signal of a participant is checked for its presence by means of an edge detection in the participant.

14. The participant in accordance with one of the foregoing claims,

wherein if a signal is absent at its input, a participant generates a zero-bit current for subsequent participants.

15. A communication system (5) for directed communication between participants of the communication system, having one central participant (1z) and at least one secondary participant (1', 1"),

wherein at least one of the participants is embodied in accordance with one of claims 1 through 14.

16. The communication system in accordance with claim 15,

wherein the communication system is embodied with double-ring topology, with two communication paths (10, 20), each annularly closed.

17. The communication system in accordance with claim 16,

wherein the information signal travel in the two communication paths is effected in contrary directions.

18. The communication system in accordance with one of claims 15 through 17,

wherein the participants are connected to one another via optical waveguides.

19. The communication system in accordance with one of claims 15 through 18,

wherein the communication system is a decentralized control system, having a master-slave structure, preferably for controlling and regulating a plurality of control motors.